COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'EUROPATFULL' ENTERED AT 13:50:37 ON 15 APR 2003 COPYRIGHT (c) 2003 WILA Verlag Muenchen (WILA)

FILE 'PATDPAFULL' ENTERED AT 13:50:37 ON 15 APR 2003 COPYRIGHT (C) 2003 DPMA

FILE 'PCTFULL' ENTERED AT 13:50:37 ON 15 APR 2003 COPYRIGHT (C) 2003 Univentio

FILE 'USPATFULL' ENTERED AT 13:50:37 ON 15 APR 2003 CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 13:50:37 ON 15 APR 2003 CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

=> s Saito, Noriaki/in

48 SAITO, NORIAKI/IN

=> s novolak resin# and formaldehyde3 and (phenol or ortho-cresol or 0-cresol) 3 FILES SEARCHED...

O NOVOLAK RESIN# AND FORMALDEHYDE3 AND (PHENOL OR ORTHO-CRESOL OR L2 0-CRESOL)

=> s novolak resin# and formaldehyde and (phenol or ortho-cresol or o-cresol)

4266 NOVOLAK RESIN# AND FORMALDEHYDE AND (PHENOL OR ORTHO-CRESOL OR T.3 O-CRESOL)

=> s 13 and oxalic acid catalyst#

48 L3 AND OXALIC ACID CATALYST#

=> s 14 and temperature# and pressure

17 L4 AND TEMPERATURE# AND PRESSURE

=> s 15 and ortho ratio

1 L5 AND ORTHO RATIO L6

=> d

L6 ANSWER 1 OF 1 USPATFULL

#### Füll Peferences

2002:172464 USPATFULL ΑN

Method of producing novolak resin TΙ

Saito, Noriaki, Toyonaka-shi, JAPAN IN

Aizu, Ichishi, Niihama-shi, JAPAN

Nakajima, Nobuyuki, Niihama-shi, JAPAN

Fujiwara, Masahiro, Niihama-shi, JAPAN

Yano, Koji, Niihama-shi, JAPAN

SUMITOMO CHEMICAL COMPANY, LIMITED (non-U.S. corporation) PA

20020711 US 2002091224 A1ΡI

US 2001-364 20011204 (10)  $\overline{\mathsf{AI}}$ A1 JP 2000-377258 20001212 PRAI

20001212

JP 2000-377259 JP 2001-153632 20010523

DT Utility

APPLICATION FS

LN.CNT 579

INCLM: 528/129.000 INCL NCLM: 528/129.000 NCL

IC [7] ICM: C08G008-04
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 15 1-17

L5 ANSWER 1 OF 17 EUROPATFULL COPYRIGHT 2003 WILA



# PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

342035 EUROPATFULL ED 20000917 EW 198946 FS OS AN Powdered epoxy resin compositions. TIEN Pulverfoermige Epoxydharzzusammensetzungen. TIDE Compositions de resines epoxydes sous forme de poudre. TIFR Bymark, Richard M. c/o Minnesota Mining and, Manufacturing Company 3M IN Austin Center, P.O. Box 2963 Austin Texas 78769-2963, US; Kirk, Alan R. c/o Minnesota Mining and, Manufacturing Company 2501 Hudson Road P.O.Box, 33427 St. Paul, Minnesota 55133-3427, US; Griggs, Allen L. c/o Minnesota Mining and, Manufacturing Company 2501 Hudson Road P.O.Box, 33427 St. Paul Minnesota 55133-3427, US; Martin, Steven J. c/o Minnesota Mining and, Manufacturing Company 2501 Hudson Road P.O. Box, 33427 St. Paul, Minnesota 55133-3427, US MINNESOTA MINING AND MANUFACTURING COMPANY, P.O. Box 33427, St. Paul PA Minnesota 55133-3427, US SO Wila-EPZ-1989-H46-T1 R DE; R FR; R GB; R IT DS EPA2 EUROPAEISCHE PATENTANMELDUNG PIT A2 19891115 EP 342035 PIOD 19891115

L5 ANSWER 2 OF 17 PCTFULL COPYRIGHT 2003 Univentio



ΑI

PRAI

AN 2002031011 PCTFULL ED 20020515 EW 200216

TIEN FRACTIONATION OF RESINS USING A STATIC MIXER AND A LIQUID-LIQUID CENTRIFUGE

19890511

19880512

C09D005-00

TIFR FRACTIONNEMENT DE RESINES AU MOYEN D'UN MELANGEUR FIXE ET D'UNE CENTRIFUGEUSE LIQUIDE-LIQUIDE

IN WANAT, Stanley, F., 3 Frances Lane, Scotch Plains, NJ 07076, US; RAHMAN, M., Dalil, 62 Concord Ridge Road, Flemington, NJ 08822, US; XIANG, Zhong, 1142 Easton Avenue, Apartment G, Somerset, NJ 08873, US

PA CLARIANT INTERNATIONAL LTD, Rothausstrasse 61, CH-4132 Muttenz, CH [CH, CH], for JP only; CLARIANT FINANCE (BVI) LIMITED, Wickhams Cay, P.O. Box 662, Road Town,

Tortola, VG [-, -], for all designates States except JP
AG HUETTER, Klaus, Clariant Service GmbH, Patente, Marken, Lizenzen, Am
Unisys-Park 1, 65843 Sulzbach, DE

LAF English LA English

LA English DT Patent

PI WO 2002031011 A2 20020418

DS W: CN JP KR SG

EP 1989-304781 US 1988-193498

ICM C08G059-62

ICS C09D003-58

RW (EPO): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

AI WO 2001-EP11357 A 20011002 PRAI US 2000-09/687,137 20001013 US 2000-09/698,724 20001027

ICM C08G008-00

ICS B01D017-038; G03F007-023

```
COPYRIGHT 2003 Univentio
    ANSWER 3 OF 17 PCTFULL
L5
   Full
   Text
       2000033137 PCTFULL ED 20020515
ΑN
       PREPARATION OF FRACTIONATED NOVOLAK RESINS BY A NOVEL EXTRACTION
TIEN
       NOUVELLE TECHNIQUE D'EXTRACTION POUR LA PREPARATION DE RESINES NOVOLAQUE
       TECHNIOUE
TIFR
       FRACTIONNEES
       WANAT, Stanley, F.;
IN
       RAHMAN, Dalil, M.;
       KOKOSZKA, John, J.;
       NARASIMHAN, Balaji
       CLARIANT INTERNATIONAL LTD.
PA
       English
LA
       Patent
DT
                             A2 20000608
       WO 2000033137
ΡI
                    CN JP KR SG AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL
DS
                    PT SE
                             A 19991103
       WO 1999-EP8391
ΑI
                                19981112
       US 1998-09/190,763
PRAI
       G03F007-023
ICM
       C08G008-08
ICS
                               COPYRIGHT 2003 Univentio
     ANSWER 4 OF 17 PCTFULL
L5
    Full
   Text
       1999031157 PCTFULL ED 20020515
AN
       FRACTIONATED NOVOLAK RESIN AND PHOTORESIST COMPOSITION THEREFROM
TIEN
       RESINE NOVOLAK FRACTIONNEE ET COMPOSITION DE RESINE PHOTOSENSIBLE
TIFR
        QU'ELLE PERMET D'OBTENIR
        RAHMAN, M., Dalil;
IN
        COOK, Michelle, M.;
        LU, Ping-Hung
        CLARIANT INTERNATIONAL, LTD.
PΑ
        English
T.A
        Patent
ידים
                              A1 19990624
        WO 9931157
 ΡI
                    CN JP KR SG AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL
DS
        W:
                    PT SE
                              A 19981201
        WO 1998-EP7754
ΑI
                                 19971215
        US 1997-08/991,034
 PRAI
        C08G008-08
 ICM
        G03F007-023
 ICS
      ANSWER 5 OF 17 USPATFULL
             (Mislage)
    Full
    Text
           References
        2003:92961 USPATFULL
 ΑN
        Negative photoresist compositions for the formation of thick films,
 TI
        photoresist films and methods of forming bumps using the same
        Saito, Koji, Kanagawa, JAPAN
 IN
        Misumi, Kouichi, Kanagawa, JAPAN
        Okui, Toshiki, Kanagawa, JAPAN
        Komano, Hiroshi, Kanagawa, JAPAN
        TOKYO OHKA KOGYO CO., LTD. (non-U.S. corporation)
 PA
                                 20030403
        US 2003064319
                            Α1
 PΙ
                                 20020520 (10)
        US 2002-147984
                            Α1
 ĀΙ
                             20010521
        JP 2001-151131
 PRAI
        Utility
 DT
        APPLICATION
 FS
 LN.CNT 903
        INCLM: 430/270.100
 INCL
        INCLS: 430/325.000
```

NCL NCLM: 430/270.100 NCLS: 430/325.000

IC [7]

ICM: G03F007-038

L5 ANSWER 6 OF 17 USPATFULL

### Full Citing Text References

AN 2003:86101 USPATFULL

TI Positive photoresist composition for the formation of thick films,

photoresist film and method of forming bumps using the same

IN Misumi, Kouichi, Kanagawa, JAPAN
Saito, Koji, Kanagawa, JAPAN
Okui, Toshiki, Kanagawa, JAPAN
Komano, Hiroshi, Kanagawa, JAPAN

PA TOKYO OHKA KOGYO CO., LTD. (non-U.S. corporation)

DT Utility

FS APPLICATION LN.CNT 867

INCL INCLM: 430/190.000

INCLS: 430/189.000; 430/193.000

NCL NCLM: 430/190.000

NCLS: 430/189.000; 430/193.000

IC [7]

ICM: G03C001-52

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 17 USPATFULL

## Full Citing Text References

AN 2003:26414 USPATFULL

TI Fractionation of resins using a static mixer and a liquid-liquid centrifuge

IN Wanat, Stanley F., Scotch Plains, NJ, United States
Rahman, M. Dalil, Flemington, NJ, United States
Xiang, Zhong, Somerset, NJ, United States

PA Clariant Finance (BVI) Limited, VIRGIN ISLANDS (BRITISH) (non-U.S.

corporation)

<u>PI</u> <u>US 6512087</u> B1 20030128 <u>US 2000-69</u>8724 20001027 (9)

RLI Continuation-in-part of Ser. No. US 2000-687137, filed on 13 Oct 2000

DT Utility
FS GRANTED
IN CAT 947

LN.CNT 947

INCL INCLM: 528/502.000D

INCLS: 528/129.000; 528/148.000; 430/192.000; 430/193.000; 210/634.000

NCL NCLM: 528/502.000D

NCLS: 210/634.000; 430/192.000; 430/193.000; 528/129.000; 528/148.000

IC [7]

ICM: C08F006-04 ICS: G03F007-023

EXF 430/270-1; 430/192; 430/193; 430/325; 430/326; 430/330; 528/148;

528/129; 528/502D; 210/634

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

#### L5 ANSWER 8 OF 17 USPATFULL

# Full Citing Text References

AN 2002:172464 USPATFULL

TI Method of producing novolak resin
IN Saito, Noriaki, Toyonaka-shi, JAPAN

```
Aizu, Ichishi, Niihama-shi, JAPAN
       Nakajima, Nobuyuki, Niihama-shi, JAPAN
        Fujiwara, Masahiro, Niihama-shi, JAPAN
        Yano, Koji, Niihama-shi, JAPAN
        SUMITOMO CHEMICAL COMPANY, LIMITED (non-U.S. corporation)
PA
PΙ
       US 2002091224
                           A1
                                20020711
AΙ
       US 2001-364
                           A1
                                20011204 (10)
PRAI
        JP
          2000-377258
                            20001212
        JP 2000-377259
                            20001212
        JP 2001-153632
                            20010523
DT
       Utility
FS
       APPLICATION
LN.CNT 579
INCL
       INCLM: 528/129.000
NCL
       NCLM: 528/129.000
IC
       [7]
       ICM: C08G008-04
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 9 OF 17
                     USPATFULL
           Olding
    Full
   Text
          References
ΑN
       2000:125188 USPATFULL
ΤI
       Preparation of fractionated novolak resins by a novel extraction
TN
       Wanat, Stanley F., Scotch Plains, NJ, United States
       Rahman, M. Dalil, Somerville, NJ, United States
       Kokoszka, John J., Warwick, RI, United States
       Narasimhan, Balaji, Highland Park, NJ, United States
       Clariant Finance (BVI) Limited, Virgin Islands (British) (non-U.S.
PA
       corporation)
PΙ
       US 6121412
                                20000919
ΑI
       US 1999-418239
                                19991014 (9)
RLI
       Continuation-in-part of Ser. No. US 1998-190763, filed on 12 Nov 1998,
       now abandoned
DT
       Utility
       Granted
LN.CNT 1037
INCL
       INCLM: 528/502.000D
       INCLS: 528/129.000; 528/144.000; 528/491.000; 430/270.100; 438/455.000;
              438/689.000; 427/352.000; 427/372.200; 210/634.000
NCL
       NCLM:
              528/502.000D
       NCLS:
              210/634.000; 427/352.000; 427/372.200; 430/270.100; 438/455.000;
              438/689.000; 528/129.000; 528/144.000; 528/491.000
IC
       [7]
       ICM: C08F006-04
       ICS: C08F006-22; C08G014-04
EXF
       528/502D; 528/129; 528/144; 528/491; 430/270.1; 427/352; 427/372.2;
       210/634; 438/455; 438/689
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 10 OF 17
                      USPATFULL
   Full
            Text
         Peferences
ΑN
       2000:40811 USPATFULL
ΤI
       Fractionated novolak resin and photoresist composition therefrom
IN
       Rahman, M. Dalil, Flemington, NJ, United States
       Cook, Michelle, Somerville, NJ, United States
       Lu, Ping-Hung, Bridgewater, NJ, United States
PΑ
       Clariant Finance (BVI) Limited, Virgin Islands (British) (non-U.S.
       corporation)
PΙ
       US 6045966
                               20000404
ΑI
       US 1997-991034
                               19971215 (8)
DT
       Utility
```

```
LN.CNT 964
       INCLM: 430/270.100
INCL
       INCLS: 430/311.000; 528/155.000; 528/165.000
              430/270.100
NCL
              430/311.000; 528/155.000; 528/165.000
       NCLS:
IC
       ICM: G03C005-00
       528/155; 528/165; 430/270.1; 430/311
EXF
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 11 OF 17 USPATFULL
L5
            Full
          References
   Text
       97:123007 USPATFULL
AN
       Positive photoresist coating solution comprising a mixed solvent of
ΤI
       propylene glycol monopropyl ether and 2-heptanone
       Ohno, Hayato, Kanagawa, Japan
IN
       Nakao, Taku, Kanagawa, Japan
       Harada, Hisanobu, Kanagawa, Japan
       Hidesaka, Shinichi, Kanagawa, Japan
       Kohara, Hidekatsu, Kanagawa, Japan
       Nakayama, Toshimasa, Kanagawa, Japan
       Tokyo Ohka Kogyo Co., LTD., Kanagawa, Japan (non-U.S. corporation)
PA
                                19971230
ΡI
       US 5702862
       us 1997-797663
                                19970131 (8)
AΙ
       JP 1996-40461
                            19960202
PRAI
DT
       Utility
FS
       Granted
LN.CNT 481
       INCLM: 430/191.000
INCL
       INCLS: 430/192.000; 430/193.000
               430/191.000
NCL
       NCLM:
               430/192.000; 430/193.000
       NCLS:
IC
       [6]
       ICM: G03F007-023
       430/191; 430/192; 430/193
EXF
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 12 OF 17 USPATFULL
L5
   Full
Text
             STATE OF
          References
       86:52384 USPATFULL
AN
       Aromatic carboxylic acid and metal-modified phenolic resins and methods
TΙ
       of preparation
       Ginter, James W., Cheektowaga, NY, United States
IN
       Thorpe, Donald H., Williamsville, NY, United States
       Cooke, Victor F. G., Youngstown, NY, United States
       Occidental Chemical Corporation, Niagara Falls, NY, United States (U.S.
PA
       corporation)
                                 19860916
ΡI
       US 4612254
                                 19850307 (6)
\overline{\mathtt{AI}}
       US 1985-709461
\overline{\mathtt{DT}}
       Utility
       Granted
FS
LN.CNT 1586
       INCLM: 428/531.000
INCL
        INCLS: 346/210.000; 346/211.000; 346/212.000; 346/216.000; 346/217.000;
               346/225.000; 428/327.000; 428/326.000; 524/509.000; 524/510.000;
               524/595.000; 524/596.000; 525/506.000; 525/508.000; 528/139.000;
               528/140.000; 528/144.000; 528/146.000; 528/147.000; 528/148.000
               503/210.000
NCL
       NCLM:
               428/326.000; 428/327.000; 503/211.000; 503/212.000; 503/216.000;
       NCLS:
               503/217.000; 503/225.000; 524/509.000; 524/510.000; 524/595.000;
               524/596.000; 525/506.000; 525/508.000; 528/139.000; 528/140.000;
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FS

Granted

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528/144.000; 528/146.000; 528/147.000; 528/148.000
 IC
        [4]
        ICM: C08G008-32
        ICS: C08L061-14
        525/506; 525/508; 528/148; 528/139; 528/140; 528/144; 528/146; 528/147;
 EXF
        524/596; 524/509; 524/510; 524/595; 346/210; 346/211; 346/212; 346/216;
        346/217; 346/225; 428/327; 428/326; 428/531
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
      ANSWER 13 OF 17 USPATFULL
           Citima
    Full
           References
    Text
AN
        82:27450 USPATFULL
        Catechol resins for the shell process
TI
        Craig, Robert S., Hoffman Estates, IL, United States
IN
 PA
        Acme Resin Corporation, Englewood Cliffs, NJ, United States (U.S.
        corporation)
PΙ
        US 4333513
                                 19820608
\overline{\mathsf{AI}}
        US 1981-240641
                                 19810305 (6)
        Division of Ser. No. US 1979-90388, filed on 1 Nov 1979, now patented,
RLI
        Pat. No. US 4281090, issued on 8 Jul 1981 which is a division of Ser.
       No. <u>US 1978-869407</u>, filed on 16 Jan 1978, now patented, Pat. No. <u>US</u>
        4206262, issued on 3 Jun 1980
DT
        Utility
        Granted
LN.CNT 296
INCL
        INCLM: 164/526.000
        INCLS: 264/220.000; 264/221.000
NCL
              164/526.000
       NCLM:
       NCLS: 264/220.000; 264/221.000
IC
        [3]
        ICM: B22C001-22
EXF
       164/526; 264/220; 264/221; 525/501; 260/38
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 14 OF 17 USPATFULL
            n Sielden
    Full
          Peferences
   Text
       81:40957 USPATFULL
AN
       Catechol resins for the shell process
TI
IN
       Craig, Robert S., Hoffman Estates, IL, United States
PA
       Acme Resin Corporation, Forest Park, IL, United States (U.S.
       corporation)
ΡI
       US 4281090
                                 19810728
ΑI
       US 1979-90388
                                 19791101 (6)
RLI
       Division of Ser. No. US 1978-869407, filed on 16 Jan 1978, now patented,
       Pat. No. US 4206262
DТ
       Utility
FS
       Granted
LN.CNT 277
       INCLM: 525/501.000
INCL
       INCLS: 260/038.000
NCL
       NCLM:
              525/501.000
       NCLS:
              523/145.000; 524/541.000
TC.
       [3]
       ICM: C08L061-12
       525/495; 525/501; 528/155; 260/DIG.40; 260/38
EXF
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 15 OF 17 USPATFULL
L5
            Full
   Text
          References
       80:27035 USPATFULL
ΑN
ΤI
       Catechol resins for the shell process
```

```
Craig, Robert S., Hoffman Estates, IL, United States
IN
       Acme Resin Corporation, Forest Park, IL, United States (U.S.
PA
       corporation)
ΡI
       US 4206262
                                19800603
                                19780116 (5)
ΑI
       US 1978-869407
       Utility
DT
       Granted
FS
LN.CNT 290
       INCLM: 428/404.000
INCL
       INCLS: 260/038.000; 428/407.000; 164/043.000
NCL
              428/404.000
       NCLM:
              164/021.000; 164/526.000; 428/407.000; 524/448.000
       NCLS:
       [2]
IC
       ICM: B32B019-04
       ICS: B32B027-14; B32B027-47
       428/404; 428/407; 428/403; 428/454; 428/524; 260/38; 260/DIG.40; 427/221
EXF
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 16 OF 17 USPATFULL
L5
            energie.
   Full
          References
   Text
ΑN
       78:7183 USPATFULL
ΤI
       Plugging compositions for blast furnace tap holes
       Funabiki, Kyohei, Fujieda, Japan
IN
       Tokunaga, Tetsuya, Fujieda, Japan
       Sumitomo Durez Company, Ltd., Tokyo, Japan (non-U.S. corporation)
PΑ
PΙ
       US 4072531
                                19780207
ΑI
       US 1976-666290
                                19760312 (5)
       Continuation-in-part of Ser. No. US 1975-639679, filed on 11 Dec 1975,
RLI
       now Defensive Publication No.
PRAI
       JP 1975-30669
                            19750315
DT
       Utility
       Granted
FS
LN.CNT 280
       INCLM: 106/056.000
INCL
       INCLS: 106/055.000; 106/058.000; 106/065.000; 106/067.000; 260/038.000
              523/140.000
NCL
       NCLM:
       NCLS:
              501/099.000; 501/109.000; 501/127.000; 501/128.000; 501/130.000;
              524/594.000
TC
       [2]
       ICM: C04B035-02
       ICS: C04B035-66; C04B035-04; C04B035-66
EXF
       106/56; 106/67; 106/65; 106/58; 106/55; 260/38
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 17 OF 17 USPATFULL
L5
            Full
          References
   Text
ΑN
       76:42905 USPATFULL
ΤI
       Process for preparing phenolic filaments
IN
       Koyama, Hiroaki, Osaka, Japan
       Nippon Kynol Inc., Osaka, Japan (non-U.S. corporation)
PA
PΙ
                                19760803
       US 3972959
ΑI
       US 1974-517029
                                19741022 (5)
PRAI
       JP 1973-119673
                            19731024
       Utility
DT
       Granted
FS
LN.CNT 741
INCL
       INCLM: 260/841.000
       INCLS: 008/115.500; 260/054.000; 260/055.000; 260/056.000; 260/059.000R;
              260/843.000; 260/847.000; 260/848.000; 264/176.000F; 264/236.000;
              264/347.000
NCL
       NCLM:
              525/429.000
       NCLS:
              008/115.560; 264/211.150; 264/211.160; 264/236.000; 264/347.000;
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525/160.000; 525/164.000; 525/442.000; 528/493.000; 528/496.000

IC [2]

ICM: D06M013-12

ICS: D06M013-16; D06M013-20

EXF 260/59R; 260/841; 264/177F; 264/176F; 264/236; 264/347; 008/115.5

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=>